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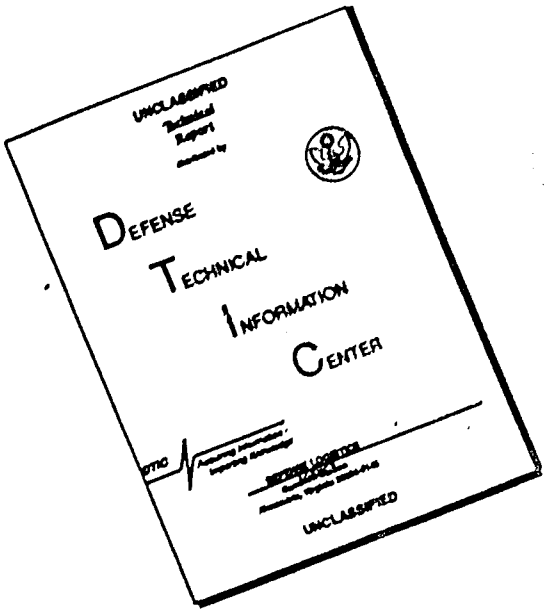

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AGDA-A (M) (19 May 71) FOR OT UT 704249

7 June 1971

SUBJECT: Operational Report - Lessons Learned, Headquarters, 39th Engineer Battalion, Period Ending 31 October 1970

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DEPARTMENT OF THE ARMY
HEADQUARTERS 39TH ENGINEER BATTALION (COMBAT)
APO SAN FRANCISCO 96325

EGD-BA-3

31 October 1970

SUBJECT: Operational Report of 39th Engineer Battalion (Combat) for Period Ending 31 October 1970, RCS CSFOR-65 (R1)

THRU: Commanding Officer
45th Engineer Group
ATTN: EGD-3
APO 96308

Commanding General
18th Engineer Brigade
ATTN: AVBC-C
APO 96377

Commanding General
United States Army, Vietnam
ATTN: AVHGC-DST
APO 96375

Commander in Chief
United States Army, Pacific
ATTN: GPOP-DT
APO 96558

TO: Assistant Chief of Staff for Force Development
Department of the Army (ACSFOR DA)
Washington, D.C. 20310

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SECTION I

A. GENERAL:

1. Organization:

During the report period, the 39th Engineer Battalion (Combat) consisted of Headquarters and Head uarters Company and four line companies. The 511th Engineer Company (Panel Bridge), the 137th Engineer Company (Ligth Equipment), and the 59th Engineer Company (Land Clearing) remained attached to the battalion throughout the report period. The 39th Engineer Battalion Provisional Land Clearing Platoon remained assigned to Headquarters Company and is presently on maintenance standdown preparing for an equipment turn over to the 118th ARVN Engineer Company (Land Clearing).

2. Command:

The 39th Engineer Battalion (Combat) remained under the command of the Commanding Officer, 45th Engineer Group (Construction). The Battalion remained in support of the Americal Division throughout the report period, with Headquarters and Headquarters Company located within the CHU LAI Base (BT 534036). Incumbent commanders at the close of the report were as follows:

CO, 39th Engr Bn	LTC James G. Ton
CO, HHC, 39th Engr Bn	CPT Sam S. McAfee
CO, Co A, 39th Engr Bn	CPT Roy E. Smith
CO, Co B, 39th Engr Bn	CPT Vernon K. Pack
CO, Co C, 39th Engr Bn	CPT Ernest C. Heimberg
CO, Co D, 39th Engr Bn	CPT Michael S. Steiger
CO, 137th Engr Co (LE)	CPT James C. Branch
CO, 511th Engr Co (PB)	1LT George P. Craig JR.
CO, 59th Land Clearing Co	CPT William A. Kern

3. Major Activities:

During the report period the Battalion completed the following projects: the upgrading of ROUTE HL-525 from (BS 646923) to (BT 620013) to minimum all weather standards, the SON HA (BS 388698) TOC Bunker, construction of a Mess Hall for the 23rd Medical Battalion at LZ BRONCO (BS 815383), construction of living, fighting, and ammo bunkers at TIEN PHUOC (BT 120140) for the 3/18 Artillery Battery and the 3/16 Artillery Battery, rebuilding five (5) refuel pads for the 178th Assualt Helicopter Company, construction of the CHU LAI EAST Traffic Control Tower, land clearing operations in WEST MO DUC (BS 695680), airfield repair at LZ BRONCO, and the drilling of a well at HILL 411 (BS 539731).

The upgrading of ROUTE 521, ROUTE 522 and ROUTE 523 to single lane minimum all weather standards was continued throughout the report period. Land Clearing operations in the Batangan Peninsula were also continued throughout the report period. Upgrading of ROUTE 533 from TAM KY (BT 318221) to TIEN PHUOC (BT 120140) to single lane all weather standards continued as did pier protection construction on SONG VE BRIDGE (BS 695-635).

During the report period, bunker construction at CHU LAI (BT 534036) and TRA BONG (BS 347881) was initiated. Also initiated was the bunker construction and airfield repair at MINH LONG (BS 534516) and construction of the Class I Warehouse at DUC PHO (BS 815383). Continuous missions throughout the report period in the Battalion AO included quarry and crusher operations in CHU LAI, repair and maintenance on QL-1 which included construction of concrete headwalls and bridges, minesweep responsibilities on all secondary LOCs, engineer support of units in the AO, and civic action operations in the AO.

a. ROUTE 525 was completed on 1 October 1970. The completed road consists of 16.5 kilometers of single lane minimum all weather road. 35,118 cubic yards of laterite, 934 cubic yards of rock and 9,000 gallons of RC-800 were utilized in upgrading the road to specifications. 25 culverts were constructed to fulfill the drainage requirements.

b. On 21 August 1970, the disassembling of 75 pieces of MX19 matting and removal of one section of concrete patching was initiated at LZ BRONCO. The subgrade was then brought to grade and compacted. The matting was reassembled with replacement of three damaged sections necessary and the project was completed on 25 August 1970.

c. The mess hall for the 23rd Medical Battalion at LZ BRONCO (BS 815383) was completed on 22 August 1970. The 40'x96' mess hall was constructed with a concrete floor, grease trap, interior walling and drainage from both kitchen and wash room.

d. The living and ammo bunkers at TIEN PHUOC (BT 120140) were completed on 8 September 1970 and consisted of the construction of twenty-four 12'x16'x8' ammo bunkers and one (1) 20'x32'x8' living bunker for the 3/16 Artillery and four (4) 20'x40'x8' ammo bunkers and seven (7) 20'x32'x8' living bunkers for the 3/18 Artillery. Also, one (1) 155mm gun pad was refurbished and one was relocated for the 3/18 Artillery.

e. Five refuel pads for the 178th Assualt Helicopter Company at CHU LAI was refurbished on 21 August 1970, the project consisted of removal of all the old M8A1 matting, rocking, grading, and compacting the subbase with 105 cubic yards of base course, shooting it with RC-800, then placing and anchoring 150 pieces of M8A1 matting.

f. The CHU LAI EAST Traffic Control Tower for the 362nd Aviation Detachment was completed on 7 October 1970. The 30 foot tower consisted of a plexiglas enclosed platform atop a pile braced substructure set in concrete footers.

g. The SON HA (BS 388698) TOC Bunker was completed on 30 September 1970. The 39th Engineer Battalion provided material support and technical assistance in completing this high priority project.

h. The Provisional Land Clearing Platoon completed operations in WEST MO DUC by clearing 385 acres and destroying 475 meters of tunnel, 1,300 meters of trenches and various kinds of ordnance. The Land Clearing Platoon returned to CHU LAI on 16 August 1970 to prepare for an equipment turn over to the 118th ARVN Land Clearing Company.

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i. Land Clearing Operations by the 59th Engineer Company (Land Clearing) continued in the BATANGAN PENINSULA with 10,815 acres having been cleared and 3,506 meters of tunnel, 1,005 meters of trenches, 112 bunkers and numerous types of ordnance found and destroyed during this reporting period.

j. The upgrading of ROUTE HL-521 continued throughout the report period. Two bridges were constructed and a third initiated. An eight (8) tube multi-culvert complex was installed and 14 kilometers of roadway and causeway were upgraded to single lane minimum all weather standards.

k. ROUTE HL-533 construction also continued to upgrade the road to single lane all weather specifications. 21 kilometers of road were upgraded to single lane all weather standards utilizing 11,472 cubic yards of base course and installation of 67 culvert sites, including two (2) mulit-culvert sites, each consisting of eight (8) 72" CMP's.

l. Work on ROUTE HL-522 and ROUTE 523 EXTENSION was initiated during the period but at the close of the report period has been diverted to other higher priority projects because the rainfall in this area has made further construction impossible. On ROUTE HL-522, 11.0 kilometers of the 12.5 kilometers were upgraded to single lane fair weather standards, while on ROUTE HL-523 EXTENSION one (1) kilometer of the 6 kilometer extension was upgraded to single lane fair weather standards.

m. Route Maintenance and Repair on QL-1 has required a major effort. Due to the monsoons, bridges, culverts, and shoulders along the 150 kilometers of QL-1 in the AO have been under constant repair and maintenance by all units in the Battalion. To date, 1,650 meters of washed out shoulder have been repaired and upgraded, six bridges repaired, two (2) culverts and headwalls replaced, a 60 foot timber bent bridge constructed and a multi-culvert complex initiated. Construction of concrete headwalls along QL-1 continued with 80% of the scheduled headwalls completed.

n. Bunker and Tower construction and perimeter-defensive lighting installation at CHU LAI and Bunker construction at TRA BONG was initiated during the period. At CHU LAI eight (8) 8'x8' fighting bunkers and 26 perimeter lights were installed, with the project 90% complete at the close of the period. Three (3) 16'x32' living bunkers at TRA BONG were completed and this project was 85% complete at the close of the report period. Lack of materials has hampered the completion of both these projects.

o, Construction of a Class I Warehouse at DUC PHO was initiated. At the end of the report period the footers were constructed and two walls were prefabricated.

p. Well drilling operations at HILL 411 (BS 539734) were completed on 14 October 1970. Casing and screen were placed at the 28' level because of the dense rock encountered. The submersible pump was placed at the 74' level and although the using unit does not have sufficient power to run the pump, the pump was tested at CHU LAI and is operational.

q. The construction of eleven (11) 8'x8' bunkers at MINH LONG was completed on 8 September 1970. Improvement on the existing airfield is presently 50% complete and in a hold status due to a lack of materials. 8

r. The 75 TPH primary rock crusher continued operations in CHU LAI during the report period. Production was down due to the crusher being deadlined for jaws and a starter, and the diversion of haul trucks to Secondary LOC projects. In spite of this the crusher produced 4,564 cubic yards of $2\frac{1}{2}$"(-) rock and 975 cubic yards of 4"(-) rock during the report period.

s. SONG VE BRIDGE pier protection was initiated this period with placement of protection on piers #7, #8, and #9, and the construction of the frame work on piers #1 and #2. The completion of this project was delayed by a lack of materials and now high water levels are prohibiting completion.

4. Activities of Headquarters Company:

Throughout the report period Headquarters Company, 39th Engineer Battalion (Combat) was located at CHU LAI (BT 534036). Headquarters Company continued its mission of supporting the line companies with heavy equipment, accomplishing engineer support tasks for the Americal Division within the CHU LAI base area and Battalion AO.

During the period, the Heavy Equipment Platoon was employed supporting and assisting the line companies as needed. Heavy Equipment's 20 ton Rough Terrain Crane was utilized by Company C on ROUTE HL-521 for construction of their three bridges. The Rough Terrain Crane and the platoon's 20 ton Quickway Crane were also used on various CHU LAI projects and on the construction of Bridge 100 (BS 684658) on QL-1. The platoon's scoop loader was utilized by the 137th Engineer Company (LE) in their quarry to load blast rock and base course. It was also used on several route upgrading projects. Graders were utilized on ROUTES 521, 522, and 525 and on CHU LAI perimeter road upgrading. The two (2) 10 ton tractors and 25 ton lowbeds were constantly supporting battalion missions throughout the Americal AO and much of MTZ1. The one 250 CFM Air Compressor was utilized on QL-1 repair and maintenance and other construction projects. A dozer and a 13 wheel roller were employed by Company B on ROUTE HL-525 and then by Company A on ROUTE HL-522.

The Land Clearing Platoon continued clearing in the MO DUC area (BS 750860). From the beginning of the report period to 3 August 1970, the Land Clearing Platoon cleared 261 acres and found and destroyed: 215 meters of tunnel; 350 meters of trenches; 30 bunkers; 3 - 155mm rounds; 1 - 60 mm round; 1- 81mm round; 1- 105mm round; and 3 AP mines. The project was completed on 3 August 1970 and the platoon began clearing in the WEST MO DUC area (BS 695580).

On 15 August 1970, the Land Clearing Platoon completed their operations in WEST MO DUC, clearing 385 acres, and destroying 475 meters of tunnel; 1,300 meters of trenches; 55 bunkers; 9 AP mines; 2 Chicom grenades; 2 - 105mm rounds; 2 - 155mm rounds; 6 - 81mm rounds; 11 LAW's;

300 pounds of rice and 60 pairs of sandals.

On 16 August 1970, the Provincial Land Clearing Platoon moved back to CHU LAI where it is in maintenance standdown in preparation for turn over of its equipment to the 118th ARVN Land Clearing Company.

Headquarters Company has continued work on the Battalion bunker line at CHU LAI and has continued to work on improving the company area. A continuous maintenance and upgrading program for the perimeter fences and bunkers has been in progress for the entire period.

Enemy activity in the CHU LAI area was very light during the report period with only tentative probes affecting the base camp. On 16 October 1970, HQ-59, the maintenance contact truck, was ambushed on QL-1 south of CHU LAI at (BS 568986). The men escaped injury but the vehicle was stormed and had to be left due to darkness and lack of communications. On 17 October 1970, Headquarters Company sent a team to the ambush site and recovered the vehicle.

5. Activities of Company A:

At the beginning of the report period, HQ platoon was located at CHU LAI (BT 534036), the first platoon was located at LZ BRONCO (BS 815383), the second platoon was located at MINH LONG (BS 534516), and the third platoon was located at LZ SNOOPY (BS 700607). Assigned missions included base security at LZ SNOOPY (BS 700607), SONG VE Bridge pier protection, construction of bunkers and airfield repair at MINH LONG (BS 534516), construction of a mess hall at LZ BRONCO (BS 815383), providing security for the upgrade of QL-1 between LZ BRONCO and LZ DEBBIE (BS 824347), upgrade of ROUTE HL-522, airfield repair at LZ BRONCO, route maintenance of QL-1, bunker construction at SON HA, repair of the hospital at LZ BRONCO, support of the 511th Engr Co (PB) with dump trucks for rock haul as required, and construction of a Class I Warehouse at LZ BRONCO (DUC PHO).

From 1 August 1970 to 7 August 1970, the 3rd platoon had the responsibility of providing guards for the (3), twenty-four hour bunkers at LZ SNOOPY.

The SONG VE Bridge was opened for traffic during the last period but additional work was still required this period. From 1 August 1970 to 12 September 1970, the placement of pier protection on piers #7, #8, and #9 was completed. The frame work for piers #1 and #2 was initiated but suspended due to lack of angle iron. The angle iron has presently been procurred, but the monsoon rains have caused the water level to rise, hindering the completion of the remaining pier protection. On 16 September 1970, the placement of 40 cubic yards of base rock and rip rap of the south causeway was completed.

The construction of eleven (11) 8'x8' bunkers was completed on 8 September 1970 at MINH LONG. The improvement of the existing airfield is at present 50% complete. Work on the airfield is temporarily suspended due to non-availability of #7018 welding rods.

The construction of the mess hall for B Company, 23rd Medical Battalion at LZ BRONCO was completed on 22 August 1970. The project included placement of center posts and rafters, 214 pieces of tin roofing, rafter bracing, exterior plywood walls, interior ceilings, partitions, four doors and screening.

During the period of 1 August 1970 to 8 August 1970, Company A provided security and traffic control for the overpaving operations between LZ BRONCO and LZ DEBBIE.

Construction on the upgrading of ROUTE HL-522 began on 10 August 1970 and continued throughout this report period. During this period, 36,674 cubic yards of laterite were hauled, placed and compacted on the road and 24 culverts were placed to upgrade this route to minimum all weather specifications. Due to the weather and higher priority projects, Company A has been diverted from this project with the farm to market pacification route 69% complete.

Company A was given the responsibility of supervising the construction and giving technical assitance in the construction of the SON HA... MACV bunkers at HA THANH (BS 388698). The project was initiated on 10 September 1970 and completed on 30 September 1970.

On 21 August 1970, Company A began the airfield repair at LZ BRONCO. This project consisted of the removal of 40 pieces of MX-19 matting, placment of 30 cubic yards of base rock and replacement of the matting. The project was sucessfully completed on 24 August 1970.

Throughout the report period Company A had the responsibility of QL-1 maintenance from CHU LAI to BINH SON and from MRI - MRII border to and including the SONG VE Bridge. Company has repaired 850 meters of washed out shoulders, hauling, spreading and compacting 343 cubic yards of blast rock and 624 cubic yards of base course. Company A has also r... replaced two culverts damaged from the monsoon rains.

On 10 September 1970 Company A replaced 3 pieces of tin and applied ten gallons of roofing tar on the Company B, 23rd Medical Battalion's hospital roof at LZ BRONCO. An additional 5 gallons of roofing tar was applied to the roof on 21 October 1970 to repair damage done by the 1 October 1970 storm.

Company A also recieved the mission of constructing a Class I Warehouse at LZ BRONCO for the 23rd S&T Battalion on 2 October 1970. However, due to modification of plans to meet finiancial restrictions, lack of housing and a delay in receipt of construction materials, the project was not initiated until 21 October 1970. At the end of this report period, the project was 15% complete.

Enemy activity during the report period was moderate with the majority of incidents occuring on ROUTE HL-522. There were 12 minor incidents on ROUTE HL-522 resulting in negative damage and casualties. On 17 September 1970 on ROUTE HL-522, at (BS 681847), the second platoon

leader was ambushed. He recieved one (1) B-40 rocket round, one (1) M79 round and small arms fire. The initial explosion of the B-40 rocket resulted in one (1) PF KIA and one US WIA (The driver of the ¼ ton vehicle was medivaced). Also, on QL-1 at (BS 779440 on 3 September 1970, the first platoon, Company A was removing forms from a previously poured contrete headwall when a claymore mine was discovered. The EOD team removed the item and checked the area finding negative results, first platoon continued the form removal until an explosion occured. The explosion occured from a hand grenade which had been undetected by the EOD team resulting in five (5) US WIA being medivaced.

During the report period, Company A has expended 62,212 manhours and 9,741 equipment hours on its projects. Company A has constructed one mess hall, 11 kilometers of single lane minimum all weather road, installed 24 culverts, hauled and placed 36,674 cubic yards of laterite, constructed 11 bunkers and supervised the construction of [illegible] bunker, repaired an [illegible] and three hospital roofs, repaired 850 meters of shoulders on QL-1, completed 50% of the pier protection on the SONG VE Bridge and started construction on one Class I Warehouse.

6. Activities of Company B:

At the start of the reporting period, Company B, 39th Engineer Battalion (Combat) was located at LZ DOTTIE (BS 627865), with the mission to minesweep ROUTE HL-524 and ROUTE HL-525, upgrade ROUTE HL-525 from the junction of ROUTES HL-524/523 to HON BA (BS 620013), upgrade refuel points for the 178th Avation Battalion in CHU LAI (BS 534036), Route Maintenance and Repair on QL-1 and the upgrading of ROUTE 523 EXTENSION.

During the report period construction of ROUTE 525 was completed and 35,118 cubic yards of laterite were hauled, spread, graded and compacted between BS 646923 and BT 620013. With assitance from the 511th Engineer Company (PB), 934 cubic yards of base course rock were placed, graded and compacted from BS 670966 to BS 671969 and shot with 9,000 gallons of RC-800. Drainage structures included 610 feet of culvert installed and 16 headwalls constructed. Completion of the project was delayed due to heavy enemy activity and a lack of security but was finally finished on 1 October 1970. The mission effort of secondary road construction was then shifted to the extension of ROUTE HL-523 and assisting Company C 39th Engineer Battalion (Combat) in completion of ROUTE HL-521.

The upgrading of 5 refuel points at the 178th Aviation Battalion in CHU LAI was completed this report period on 21 August 1970. The old M8A1 matting was removed, the subbase was rocked with 105 cy of base course, then graded, compacted and shot with 900 gallons of RC-800. 150 pieces of M8A1 matting was then placed and held secure with U-shaped pickets. Upon completion of the project mission effort was then diverted to route maintenance and repair on QL-1.

On 16 August 1970, route maintenance and repair on QL-1 was initiated. Five (5) bridges between TAM KY (BT 325215) and LZ DOTTIE (BS 627856) were repaired by replacing rotten pieces of decking at Bridge 93

(BS 633811), the north and south approaches were repaired by excavating the old approaches, placing 35 cubic yards of base course, compacting and shooting them with 600 gallons of RC-800. Thrity (30) tons of asphalt were then hauled to the approaches, spread and compacted to complete the approaches. Culverts with concrete headwalls were constructed at (BS 628842), (BS 639776), (BS 638776), and (BS 638778) utilizing 160 feet of CMP.

On 6 October 1970, Bridge 100 was burned down accidentally by incense burning during a religious cermony by local villagers. Company B was tasked to rebuild the bridge. Since the bridge was critical to QL-1 convoy movement, Company B worked 24 hours a day in order to complete the bridge as soon as possible. Company B removed all burnt decking, stringers and bracing, and cut the remaining piles off at the water line and capped them. Two new abutments, and three prefabbed timber bents were constructed, timber stringers and decking were placed, and the abutments backfilled and compacted with 196 cubic yards of blast rock and 112 cubic yards of 4"(-) base course. Placement of curbing and handrails completed the construction of the bridge on 17 October 1970. (Three days of construction were lost due to MPC conversion, high water and an approaching typhoon).

The first platoon moved to LZ MINUTEMAN (BS 779847) on 11 September 1970 to begin construction of ROUTE 521 and ROUTE 523. 13,278 cubic yards of laterite and 2,079 cubic yards of rock were hauled, spread, graded, and compacted from (BS 764833 to BS 775860) and from (BS 780845 to BS 772848). Ninety (90) feet of culvert and 8 culvert headwalls have constructed to date, however, the project is presently in a hold status due to the weather, and Company B has been diverted to higher priority projects.

On 20 October 1970, Company B began replacement of a concrete box culvert on QL-1 at (BS 679667). The culvert had been washed out on 1 October 1970 and Company B installed an M4T6 dry span over the culvert. Using 252 cubic yards of laterite and two 32" culverts a by-pass was constructed. The concrete box culvert was extracted and will be replaced by four (4) 72" CMP's or a 20 foot timber trestle bridge.

Enemy activities during the report period were moderate with the majority of the activity occuring on the ROUTE HL-525 project. There were 32 mining incidents, two ambush and several sniper attacks. There were 17 minor causalties on ROUTE 525, however, on 6 September 1970 two US were KIA and one US WIA, the unit platoon leader, when ambushed while on their way to a job site in a ¼ ton vehicle. Enemy activities on ROUTE 521, and ROUTE 523 were lighter, with Company B encountering several booby-traps and mines with negative casualties.

During the report period, Company B expended 99,709 manhours and 10,524 equipment hours on its projects this period. Company B constructed 16.5 kilometers of single lane minimum all weather road. They hauled and compacted 35,118 cubic yards of laterite and installed 25 culverts. Company B replaced 5 refuel pads and repaired and maintained QL-1, constructing one 60 foot timber bent bridge and starting installation of a multi-culvert site.

13 7. Activities of Company C:

At the beginning of the report period, Headquarters and Second Platoon of Company C were located in CHU LAI (BT 534036) and the First and Third Platoons were located at NDP WRONG HOLE (BS 742808). Projects in progress included the Upgrade of ROUTE HL-521, minesweep in the AOR, engineer support to units in the AOR, Civic Actions in the AOR, and route maintenance and repair.

Construction of the CHU LAI EAST Traffic Control Tower, construction of bunkers and a latrine for MACV at TRA BONG (BS 342877), construction and lighting installation for the CHU LAI Defense Command (CLDC) and repair of the CLDC TOC were projects initiated during the report period.

From 11 August 1970 to 14 August 1970 Company C mineswept a borrow pit at (BT 549022) for the 511th Engineer Company (PB). On 15 August 1970, constructed a 48'x74' pad for the 39th Engineer Battalion (Combat) Maintenance Section. The pad consisted of M8A1 padding placed on top of a laterite compacted subbase.

On 29 August 1970, repair of the CLDC TOC was begun. The sand was removed from the roof and once the structure became fully exposed it became apparent that it was too deteriorated to make repairs feasible. This project is presently in the hold status because of lack of materials available for the proper repairs. Two bunkers, bunker 605 and 607, were repaired for CLDC, footers and laterial bracing were relocated on stringer foundations.

During the report period, Company C has also provided demolition teams, consisting of four men, to the 59th Land Clearing Company in support of their operations in the BATANGAN PENINSULA. The team provides demolition support to the land clearing operations.

Construction on the upgrade of ROUTE HL-521 was underway at the start of the report period. On 2 August 1970, Bridge 1 (BS 742808) a 100 foot, timber pile, class 50 bridge was completed with the installation of the far shore wingwalls, abutment and placement of a deadman. Upgrade of the causeway between Bridge 1 and the second bridge site (BS 737820) proceeded with Company C hauling, dumping, upgrading, and compacting 22,730 cubic yards of laterite fill in constructing 1000 meters of causeway. Eight (8) 72" CMP culverts were installed in the causeway and headwalls and wingwalls constructed. On 24 August 1970, work on Bridge 2 (BS 737820) a 120 foot, timber pile, Class 50 bridge, was begun and completed on 7 September 1970. A new borrow pit was constructed beyond the second bridge and Company C hauled, placed and compacted 10,265 cubic yards of laterite on the 3 kilometers of roadway and causeway between bridge 2 and the third bridge site (BS 765-834). On 24 September 1970, the first piles for the third bridge were driven. The first bent was driven and capped and the first span of stringers had been placed when on 1 October 1970, several days of heavy rains caused extensive damage on the project. The backfill behind both abutments of bridge 1 and 2 were wased out and shoulders were badly eroded on several locations along the route.

Since 4 October 1970, Company C with assistance from 511th Engr Co (PB) hauled and placed 1004 cubic yards of rock and 944 cubic yards of laterite, and installed 108' of 48" CMP and 204' of 36" CMP in repair of water damage on ROUTE HL-521. One platoon has been diverted to CHU LAI for work on other priority projects, leaving one platoon to complete the project on or about 20 December 1970.

During the report period, Company C continued construction of a 50' observation tower for CLDC. During the last report period, the concrete base had been placed and the substructure and superstructure constructed. During this period the tower was erected on the concrete pad and guy wired. Platforms and ladders were constructed at five (5) levels with an observation platform and sleeping quarters enclosed on top. On 9 September 1970, all work, except for the anchoring of the tower to the concrete pad with angle iron braces, was completed and the project is in a hold status because of a lack of angle iron braces.

Construction of the CHU LAI EAST Traffic Control tower began on 3 September 1970. The 30 foot tower consisted of a braced pile substructure supporting a plexiglas enclosed platform. The tower was finally completed on 7 October 1970 after being delayed because of a shortage of materials and concrete.

Construction of three bunkers and a latrine for MACV at TRA BONG (BS 338880) began on 30 September 1970. The bunkers are 16'x32', constructed below ground level and backfilled with earth. All materials had to be airlifted to the work site by CH-47 Chinook because the TRA BONG road, ROUTE HL-528, was washed out on 1 October 1970 and has yet to be opened to convoy traffic. The project is now 90 percent complete with completion of the laterite the only remaining work.

On 13 October 1970, bunker and tower construction for CLDC was initiated. The project consisted of the construction of eight guard bunkers, a 35 foot observation tower, and perimeter lighting. The bunker sites were prepared with support from the 137th Engineer Company (LE). Each site was cleared, 80 cubic yards of laterite was placed and compacted and 8"x8" footers were installed. The first bunker was constructed in the 39th Engineer Battalion Headquarters area and hooked to one site on 19 October 1970. Seven other bunkers were salvaged from LZ BAYONET (BT 550015) and from CHU LAI, thus eliminating extensive construction and excessive costs.

The seven bunkers were then air liftied to their sites and repositioned by Rough Terrain Crane where needed. Ladders and outside revetment walls were then constructed once all the bunkers were in place. Thirty-six perimeter lights were also salvaged from LZ BAYONET and perimeter wire was strung by Company C. Presently the project is 90 percent complete with only the construction of a 34 foot tower remaining.

Company C also participated in Civic Actions in the AOR. They provided medical services to Vietnamese Nationals as well as provided coordination in medical air evcuation of Vietnamese Nationals in cases

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of serious injury. Company C constructed a pioneer road for the Vietnamese from (BS 731822) to (BS822818) to facilitate travel from a resettlement village on ROUTE HL-521.

Enemy activity during the report period has been light. During minesweeps and construction operations, 20 mines and booby-traps have been found and blown in place, there have been two sniper incidents and NDP has recieved two rockets with negative damage and negative casualties recieved. On 27 August 1970, a 290M scraper was hit by a command detonated mine at (BS 742787). On 1 September 1970 two culverts were discovered blown and on 6 September 1970 another 290M scraper detonated a mine resulting in a KIA. A 6 ton dump truck also detonated a mine on ROUTE HL-521 on 6 September 1970.

During the report period, Company C expended 67,608 manhours and 12,498 equipment hours on assigned missions. They have constructed one Class 50, timber pile, 100 foot long bridge, one class 50, timber pile, 120 foot long bridge, began construction on another 120 foot, Class 50, timber pile bridge, installed a multi-culvert site consisting of eight (8) 72"x50' CMP's, constructed three (3) towers and four (4) bunkers, and airlifted eight (8) bunkers, plus prepared sites for them, and have constructed eight (8) kilometers of single lane minimum all weather road and causeway.

8. Activities of Company D:

During the report period, Company D, Headquarters has been located at CHU LAI (BT 534036), first and second platoons are located at LZ JOANIE (BT 426089) and the third platoon is located at TIEN PHUOC (BT 120140). Projects assigned during the report period include construction of living bunkers, ammo bunkers and gun pads for B Battery, 3/16 Artillery, located at TIEN PHUOC, living bunkers, ammo bunkers, and gun pads for B Battery, 3/18 Artilery, TIEN PHUOC, and the Upgrading of ROUTE HL-533 from TAM KY (BT 426089) to TIEN PHUOC (BT 120140).

During the period the 1st and 2nd platoons of Company D have been working on the Upgrade of ROUTE HL-533. The 1st Platoon of the 137th Engineer Company (LE) has been attached for support on the earth work portion of the project. The 1st and 2nd platoons mineswept ROUTE HL-533 daily on a rotational basis. The minesweep averages about 10 kilometers in length. 12,969 cubic yards of laterite have been removed from seven (7) borrow pits located along the route and utilized in widening and upgrading the road. The entire road, consisting of 26 kilometers, has been upgraded to subbase grade, and twenty-one kilometers has been upgraded to single lane all weather specifications, having had 11,472 cubic yards of base course rock, placed, graded and compacted. All the 72 drainage structures have been completed except for two (2) culvert sites and two (2) steel stringer bridge sites which remain to be installed. Five percent(5%) of the sites are in need of rock, six percent (6%) of the sites need headwalls, and fifteen percent (15%) of the sites still need to have cables installed.

At TIEN PHUOC, the third platoon has completed two (2) bunker projects. For the 3/16 Artillery, twenty-four (24) 12'x16'x8' ammo storage bunkers and one (1) 20'x32'x8' living bunker was completed on 4 September 1970. For the 3/18 Artillery, seven (7) 20'x32'x8' living bunkers with protective berms were constructed, four (4) 20'x40'x8' ammo bunkers with protective berms were constructed, one (1) 155mm gun pad was refurbished, one (1) 155mm gun pad was relocated, and the design and construction of a complete drainage system for the FSB were completed on 8 September 1970.

On 9 September 1970, after completing the necessary bunker construction projects, 3rd platoon, Company D, and 1st platoon 137th Engineer Company (LE), the platoons were diverted to construction efforts on the ROUTE HL-533 project.

When weather and lack of security on ROUTE HL-533 prohibited construction efforts, Company D diverted its efforts to repair and maintenance of QL-1 from TAM KY (BT 426089) to CHU LAI (BT 534036). Company D has repaired 750 meters of washed out shoulders, hauling 212 cubic yards of blast rock and 460 cubic yards of base course, and spreading, grading and compacting the shoulers to bring them up to specifications. To date 600 meters of shoulder have been shot with RC-800.

Enemy activity during the period was light. The daily minesweep teams were delayed repeatedly by light sniper fire which resulted in negative damage and negative casualties. On 24 September 1970 at (BT 232-173), a ten (10) ton tractor pulling a low-boy trailer struck a mine on ROUTE HL-533. The vehicle was destroyed with both occupants recieving minor bruises. On 10 October 1970 at (BT 225171), a five (5) ton dump truck struck a mine destroying the truck and resulting in one (1) WIA, who was later medivaced to Japan. The same day an AVLB belonging to 26th Engineers, struck a forty pound mine at (BT 225171). On 18 October a road grader struck a forty pound mine resulting in a combat loose of the vehicle but negative casualties. On 21 October 1970, the minesweep team found three (3) mines and one booby-trap which were all blown in place.

During the report period Company D expended 69,537 manhours and 10,586 equipment hours on its assigned missions. Company D has upgraded 21 kilometers of ROUTE HL-533 to single lane all weather specifications, repaired and maintained 30 kilometers of QL-1, and constructed eight (8) 20'x32'x8' living bunkers, twenty-eight (28) 12'x16'x8' ammo bunkers, and a complete drainage system for the Fire Support Base located at TIEN PHUOC.

9. Activities of 137th Engineer Company (Light Equipment):

From 25 July 1970 until 24 October 1970, the 137th Engineer Company (LE) was located at CHU LAI (BT 531105). During the reporting period the primary mission of the 137th Engr Co (LE) was to provide equipment and technical assistance support to the various line units of the 39th Engineer Battalion engaged in secondary LOC construction. Additionally, the 137th Engr Co (LE) operated a 75TPH Crusher at CHU LAI (BT 531105) and surfaced protions of ROUTE HL-533 from TIEN PHUOC (BT120140) to the FISHHOOK area.

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The primary mission of the 137th Engr Co (LE) was to provide horizontal construction capability to the line companies of the 39th Engineer Battalion. Begining 17 June 1970 the 137th Engr Co (LE) constructed 7 ½ kilometers of all weather secondary road on ROUTE 521 in support of C Company, 39th Engineer Battalion. In this project 2/137th loaded, hauled and compacted 61,500 cy of laterite, both constructing a road and providing material for the construction of a causeway. Maximum use was made of all pit gravel in the material for the material for the causeway.

Beginning on 5 September 1970, 3/137th constructed 5 kilometers of secondary LOC in support of B Company, 39th Engineer Battalion at LZ MINUTEMAN, on the Batangan Peninsula. On this project the equipment was moved to location down the beach due to no roads the last 3 kilometers. This isolation caused dificulties in extracting the equipment. The project was terminated due to heavy rains on 20 October 1970.

Beginning on 5 September 1970, 2/137 and 3/137 constructed 14 kilometers of laterite secondary LOC on ROUTE HL-522 in support of Company A, 39th Engr Bn. A total of 49,100 cy of laterite was loaded, hauled, and compacted in the construction process. Six laterite pits were opened and used before termination of work on the project on 1 October 1970 due to torrential rains. Maximum use was made of 290Ms towards the end of the project, 5 were in use, constructing up to 2 kilometers of road per day.

Beginning on 5 May 1970, 3/137th Engr Co (LE) continued constructing an all weather secondary LOC, ROUTE HL-533 running from TIEN PHUOC (BT 120140) to TAM KY (BT 318221) in support of D Company, 39th Engr Bn. A total of 55,749 cubic yards of laterite was loaded, hauled, placed and compacted on 26 kilometer of road. The laterite subbase work was completed on 3 September 1970 and base course placement from TIEN PHUOC to TAM KY initiated. 1/137th Engr Co (LE) layed down 3,156 cubic yards of river aggregate, starting on 1 September 1970, and being halted by the river-run source being flooded out on 20 October 1970. The river-run material was used to surface 9 kilometers of road. Concurrently, 3/137th supported D/39 and the 511th Engr Co (PB) in laydown of 8,005 cubic yards of orushed rock, provided by the 137th from its crusher site and CHU-301 on the TAM KY end of the road. 1/137th Engr Co (LE) provided horizontal construction capability to B/39 in construction of ROUTE 523/524 and 525 hauling, placing, and compacting 55,723 cubic yards of laterite. In addition 12 kilometers of ROUTE 523, and 525 were peneprimed by support platoon of the 137th.

Beginning on 10 October 1970, 2/137th upgraded 3 kilometers of CHU LAI Combat Base perimeter road, hauling and compacting 1,790 cubic yards of laterite fill. Concurrently 3/137th constructed 8 bunker sites for CHU LAI Defense Command on the southern perimeter of CHU LAI Base, utilizing 568 cubic yards of laterite.

Throughout the reporting period enemy activity against the 137th Engr Co (LE) was light, with only one KIA and three WIA; only one of whom was medivaced from RVN. The company lost 3 major items of equipment to mines during the period; 2 each 290M's, and one road grader.

10. Activities of 511th Engineer Company (Panel Bridge): /8

Throughout the report period the 511th Engineer Company (PB) supported the 39th Engineer Battalion (Combat) at CHU LAI (BT 534036) and the 14th Engineer Battalion (Combat) at CAMP EVANS (YD 537327). During this period, the 511th Engineer Company (PB) continued its mission of organizing and supervising rock and asphalt hauls from the 137th Engineer Company Crusher at CHU LAI to work sites on QL-1, ROUTE HL-521, ROUTE HL-525, and ROUTE HL-533, and from the 14th Engineer Battalion's rock crusher to the road projects at CAMP EVANS. The 511th also provided security and control vehicles for asphalt and rock convoys and pulled organizational maintenance support to all OPCON vehicles.

From 6 August 1970, to 26 August 1970, the 511th hauled 532 cubic yards of base rock to ROUTE HL-525 for secondary LOC work in support of Bravo Company, 39th Engineer Battalion.

Through the period of 14 August 1970 to 12 October 1970, the second platoon of the 511th Engr Co (PB), while at CAMP EVANS, worked in support of the 14th Engineer Battalion (Combat). Their operations involved improvement of secondary roads and also the upgrading of QL-1. The second platoon hauled 8,261 cubic yards of rock in supporting these upgrading projects.

From 1 August 1970 to 11 August 1970, the 511th Engineer Company was involved in the project of repairing QL-1 south of DUC PHO. Before the project was completed, 4,050 tons of asphalt were hauled to the site. On the return trips to CHU LAI 2,740 tons of sand were hauled from the SONG VE Bridge and CHU LAI Sand Pit to the CEMU-301 Asphalt Plant.

From 16 August 1970, the 511th has been hauling crushed rock to TAM KY (BT 296232) for secondary LOC work on ROUTE 533 in support of D Company, 39th Engr Bn. At the end of the report period, 10,587 cubic yards of base course rock and 574 cubic yards of blast rock have been hauled.

On 12 October 1970, the 511th began hauling crushed rock to ROUTE HL-521 in support of Company C, 39th Engineer Battalion. To date, 273 cubic yards of base rock and 300 cubic yards of blast rock have been hauled from CHU LAI Quarry to NDP WRONG HOLE (BS 737806).

The 511th Engineer Company (PB) has also had the responsibility of supporting the 39th Engineer Battalion's route maintenance and repair work on QL-1. Since 1 October 1970 the 511th Engineer Company (PB) has hauled 837 cubic yards of blast rock and 667 cubic yards of base course for shoulder and culvert repairs on QL-1.

In accomplishing its primary mission of rock and asphalt hauling, the 511th Engineer Company has hauled a total of 1,711 cubic yards of blast rock, 21,320 cubic yards of base course, 2,740 cubic yards of sand and 4,050 tons of asphalt while logging 227,074 miles. The 511th Engineer Battalion (PB) expended 33,798 manhours and 12,786 equipment hours in accomplishing it's mission during the report period.

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11. Activities of 59th Engineer Company (Land Clearing):

At the beginning of the report period the 59th Engineer Company (Land Clearing) was engaged in the clearing of Batangan Peninsula. This area was believed to be an enemy training and staging area and has been a VC stronghold for many years. The 59th Engineer Company (LC) was tasked to eliminate bunker complexes and storage points. The project was not only tactically valuable, but also of extreme importance for resettlement.

On 1 August, the 59th Engineer Company (LC), minus the third platoon which was under the 27th Engineer Battalion (Combat) at PHU BAI, was located at Landing Zone MINUTEMAN (BS 779847). During their twenty (20) day stay at LZ MINUTEMAN, the 59th Engr Co (LC) cleared 2,530 acres (1,675 acres, center coordinates - BS 760860 and 855 acres, center coordinates - BS 780830). The 59th Engineer Company (Land Clearing), during this period found and destroyed 1,235 meters of tunnel, 355 meters of trenches, 3' bunkers, 3 - 81mm mortar rounds, 1 - 60mm mortar round, 2 - 4.2 inch mortar rounds, 1 - 155mm round, 1- 500lb bomb, 1 - 250 lb bomb and 6 AP mines. Also found during the land clearing operations were 4 - 55 gallon drums of rice, 4 - 55 gallon drums of corn, 3 - urns of rice and three urns of corn. These food staples were redistributed to the nearby resettlement village.

On 20 August 1970, the 59th Engineer Company (Land Clearing) combat assaulted HILL 43, (BS 689915), the alleged headquarters for the 47th Local Force Viet Cong Battalion, and established a NDP there. While at HILL 43, the third platoon was brought down from PHU BAI and arrived on site on 21 August 1970. The 59th Engineer Company (LC) remained on HILL 43 until 22 September 1970. During this period 5,305 acres were cleared and the following were found and destroyed: 2,271 meters of tunnel, 650 meters of trenches, 81 bunkers, 1 - 8 inch naval round, 3 Chicom grenades, 4 RPG rounds, 1 - 81mm mortar round, 2 - 155mm rounds, 3 AP mines, 5 - 60mm rounds, 1 - 250 lb bomb, and 1 - 2.75 rocket. Also uncovered were food caches containing 975 lbs of rice, 605 lbs of potatoes, 530 lbs of corn, 22 gallons of barley and 5 gallons of soybeans.

Completing its operations around the vicinity of HILL 43, the 59th Engr Co (LC) moved south to HILL 128 (BS 688870), on 22 September 1970. While on HILL 128, the 59th Engr Co (LC) cleared only 2,930 acres because of the steep terrain, the monsoon rains which not only caused the terrain to be slippery but also hampered fuel resupply which is done completely by helicopter, and the decision to begin a rotational stand-down for the platoons.

Shortly after the new NDP at HILL 128 was established, it was decided to rotate the platoons for a much needed standdown. The rotation of platoons was initiated on 28 September 1970 and 2 platoons had been rotated as of 25 October 1970. During the standdown the unit received excellent maintenance support from the 533rd Engineer Detachment. Since maintenance is an intricate part in the functioning of a smooth land clearing operations, it must also be noted that because of the heavy concentration of mines encountered, radiators, track adjustment seals, torque converter seals and turbo chargers are "critical" repair parts.

The land clearing operations on the Batangan Peninsula involve several unique problems. The Batangan Peninsula is well known for its high concentration of mines and booby-traps. They were primarily emplaced for foot troops, but have proven to be effective against tractors and tractor operations. The ordnance used as booby-traps varies from standard US manufactured M-79 rounds, 60mm and 155mm rounds, 81mm mortar rounds and other local Viet Cong inventions. The emplacement varies from below ground level to hanging booby-traps have proved to be the most hazardous, but all types are capable of causing serious injury and extensive damage. Since the new heavy duty kit is not available to this unit, additional steel plating was welded onto the cabs to reduce injuries.

Another unique problem resulted from the type of vegetation in this area. Unlike normal land clearing operations which are conducted in thick vegetation, this area is checkered with rice paddies, separated by a web like structure of hedgerows. In order to clear the hedgerows, the dozers must work perpendicular to the row and, because of the heavy concentration of booby-traps, at least twenty meters apart. A 270 foot anchor chain was also used to clear the hedgerow and proved highly successful and was very effective against mines and booby-traps. The chain is attached to two (2) dozers who work on either side of the hedgerow. In using the chain, however, radio communications is a necessity in order to coordinate the operations of both tractors.

Enemy activity during the period was light. The only enemy contact was on 8 October when Dozer 94 was hit by an RPG round. The operator was medivaced for injuries but there was negative damage to the dozer. The enemy did, however, use effective use of his mines and booby-traps during the report period. Thirty-six (36) booby-traps and mines were detonated by tractor and only sixteen (16) were detected and later blown in place.

B. INTELLIGENCE:

1. Reconnaissance:

During this report period the Battalion Reconnaissance Section ran engineer route reconnaissances fo ROUTES 521, 522, 523, 524, 525, and 533. Each recon was preceded by a detailed study of aerial photos and other source material available from Americal Division, and by an aerial recon.

Routine recons of QL-1 and the secure portions of Secondary LOC's were performed by helicopter and on the ground to determine any enemy and/or weather caused damage. The monthly and quarterly recons of culverts and bridges of QL-1 were also made.

2. Enemy Activity:

During August there was only light enemy activity in the AO and only one rocket attack on CHU LAI Base Camp consisting of eight rockets. The attack resulted in negative damage and negative casualties to the 39th Engineer Battalion and it's attached units. Enemy activity on the roads

21 was relatively moderate with a total of 40 mines and booby-trap incidents on the secondary LOC's, and 11 sniper incidents.

In September there was an increase of enemy activity on the installations with one rocket and 2 mortar attacks initiated. Activity on the Secondary LOC's remained heavy. There were 14 sniper attacks, 41 mine and booby-trap incidents, and 2 culverts blown.

Enemy activity was light during the month of October. Only 7 mines and booby-traps were encountered and there were 8 sniper attacks and 2 culverts blown.

a. Mines: During the reporting period 56 mines were encountered. The majority of mines encountered had pressure type fueses, but some were command detonated. A few mines detonated also had secondary charges. the mines encountered varied in size from 5 lbs to 50 lbs. A total of 32 mines were detonated. The following is a breakdown by number of the mines detected versus mines detonated:

MONTH	DETECTED	DETONATED	TOTAL
August	8	12	20
September	14	16	30
October	2	4	6

b. Boby-traps: From August through October, the Battalion encountered 45 booby-traps. These ranged in size from "toe poppers" (50 cal. rounds mounted over a nail or spike) to large artillery rounds. The following is a breakdown of booby-traps encountered by month:

MONTH	DETECTED	DETONATED	TOTAL
August	6	14	20
September	11	0	11
October	0	1	1

c. Other enemy initated activities during the report period are broken down as follows:

TYPE	AUGUST	SEPTEMBER	OCTOBER	TOTAL
Ambushes	1	2	1	4
Bridges Blown	0	0	0	0
Culverts Blown	0	2	2	4
Ground Probes	0	0	0	0

TYPE	AUGUST	SEPTEMBER	OCTOBER	TOTAL
Sniper Attacks	11	14	8	33
Mortar Attacks	0	2	2	4
Rocket Attacks	1	1	0	2
Road Obstacles	0	0	0	0

C. CASUALTIES:

During the report period, the battalion suffered the following casualties:

COMPANY	KIA	WIA	KNH	WNH
HHC	0	0	0	0
A Co	0	10	0	0
B Co	2	1	0	0
C Co	0	1	0	0
D Co	0	3	0	0
137th	1	2	0	0
511th	0	0	0	0
59th	0	4	0	0
TOTAL	3	21	0	0

D. OPERATIONS AND TRAINING:

The battalion operated on a seven day work week with sunday afternoons used for maintenance, training and recreation when possible.

a. The combat and operative support missions were conducted in coordination with Americal Division, providing support in Southern section of Military Region I. This consisted chiefly of secondary LOC upgrading, construction of defensive structures and to a lesser degree than in perious reports - minesweeping.

Approximately 79% of the engineer effort of the battalion was devoted to combat and operational support missions.

b. The LOC upgrading projects were originally assigned by USMACV and are part of the overall MACV*LOC program. The major sub-project the SONG VE Bridge, was completed last period except for pier protection and lighting. 2% of the Battalion's mission effort during the report period were directed towards completion of this project.

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c. The land clearing mission was coordinated through the XXIV Corps in support of the Americal Division. The 59th Engineer Company (Land Clearing) continued clearing in the Batangan Peninsula and the land clearing operations accounted for approximately 17% of the total engineer mission effort expended.

d. Base construction, civic action, and other projects accounted for the remaining 2% of the engineer effort expended by the battalion.

2. Training:

Regularly scheduled weekly training was conducted throughout the period with special emphasis on mandatory subjects directed by higher Headquarters. 18th Engineer Brigade's Consolidation Month training was also initiated during the report period on 1 October 1970.

E. MOVEMENTS:

1. Company Moves: None

2. Platoon Moves:

a. 4 August 1970 - Land Clearing Platoon relocated from MO DUC (BS 759860) to WEST MO DUC (BS 702588).

b. 7 August 1970 - 3/A/39 moved from LZ SNOOPT (BS 700607) to LZ DOTTIE (BS 627856).

c. 14 August 1970 - 2/511th (PB) moved from CHU LAI to CAMP EVANS.

d. 15 August 1970 - Land Clearing Platoon relocated from NDP at WEST MO DUC (BS 702588) to CHU LAI (BT 534036).

e. 20 August 1970 - 1,2/59th LCC moved from LZ MINUTEMAN (BS 779847) to a NDP at HILL 43 (BS 685916).

f. 21 August 1970 - 3/59th LCC moved from PHU BAI to HILL 43 (BS 685916).

g. 24 August 1970 - HQ(-)/A/39 moved from CHU LAI (BT 534036) to LZ DOTTIE (BS 627856).

h. 26 August 1970 - 2,3/A/39 moved from LZ DOTTIE (BS 627856) to ROUTE-522 NDP at (BS 673837).

i. 3 September 1970 - 2,3/B/39 moved from old ROUTE HL-525 NDP (BS 655962).

j. 11 September 1970 - 3/B/39 moved from Route HL-525 NDP (BS 629992) to LZ MINUTEMAN (BS 779847). 2/B/39 moved from ROUTE HL-525 NDP (BS 629-992) to LZ DOTTIE (BS 627856).

l. 22 September 1970 - 1,2,3/59th LCC relocated from NDP at HILL 43 (BS 685916) to NDP at HIL 128 (BS 628870).

m. 26 September 1970 - 2,3/A/39 moved to a new NDP on ROUTE HL-525 (BS 732840).

n. 4-6 October 1970 - 2,3/A/39 moved from NDP(BS 732840) to LZ DOTTIE (BS 627856).

o. 7 October 1970 - 2,3/A/39 moved from LZ DOTTIE (BS 627856) to CHU LAI (BT 534036).

p. 12 October 1970 - 3/C/39 moved from NDP WRONG HOLE (BS 742808) to CHU LAI (BT 534036).

q. 20 October 1970 - 3/A/39 moved from CHU LAI (BT 534036) to LZ BRONCO (BS 815383).

3. Squad Moves:

a. 5 August 1970 - 49th (WD) Detachment moved from CHU LAI (BT 534-036) to HIL 411 (BT 539731).

b. 19 August 1970 - 2/2/A/39 moved from MINH LONG (BS 534516) to LZ DOTTIE (BS 627856).

c. 20 September 1970 - 49th (WD) Detachment moved from HILL (BT 539-731) to CHU LAI (BT 534036).

d. 30 September 1970 - 1,2/2/C/39 moved to TRA BONG (BS 342877) from CHU LAI (BT 534036).

F. SUPPLY:

1. General.

During the report period, all companies recieved Class I, III, and IV support through CHU LAI (BT 534036).

2. Logistics Support:

Logistics support was provided by the following organizations:

a. 23rd Supply and Transportation Battalion, located at CHU LAI (BT 534036) organic to the Americal Division.

b. 596th Light Maintenance Company, located at CHU LAI (BT 534036) organic to the 80th General Support Group.

c. 661st Ordance Company (Ammo), located at CHU LAI (BT 534036), organic to the 528th Ordance Battalion in DA NANG (BT 0257).

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3. Equipment Status:

Authorized 5 ton Dump Trucks were recieved during the report period, thus removing these items from the critical shortage item list. The following items still remain critically short:

NOMENCLATURE	AUTH QTY	O/H QTY	SHORTAGE
Semi-trailer, 25 ton	22	13	9
Radio Set, AN/GRC-125	52	39	13

4. Combat Losses:

FSN	NIMENCLATURE	USA#	QTY	DATE
2420-088-9384	Tractor Wheeled, Ind 290M	8D0410	1	27 Aug
2420-088-9384	Tractor, Wheeled Ind 290M	8D7081	1	6 Sep
3805-931-7881	Grader Road, MT-70	08A20270	1	18 Oct
2320-226-6081	Truck, Tractor, 10 ton	05H54969	1	27 Sep
4940-294-9518	Shop Equip Contact Trk, MTD	N/A	1	16 Oct

5. RVN Modernization and Improvement Program (Switch Four):

During the reporting period, no transfers of equipment were made but a considerable amount of preparation was accomplished for the turn over on 1 November 1970. In preparing the equipment to be transfered, the major problems encountered are procurring certain parts and Basic Issue Items. Where in the past units recieved brand new major items of equipment, they are now recieving rebuilt equipment which for the most part does not have Basic Issue Items. Many of these items are recoverable through requsitioning but, the supply is dwindling. Unless a separate demand can be established in the logistics command, there will be increased problems in this area.

6. Water Supply:

Presently the battalion is operating four (4) water purification vans in CHU LAI (BT 534036) and one (1) at LZ DOTTIE (BS 627856). The present output is 60,000 gallons of water a day.

G. MAINTENANCE:

1. General:

The Battalion Maintenance Section continued to operate as a seperate section of the 39th Engineer Battalion at CHU LAI Base Camp. The assigned mission of the Battalion Maintenance Section is to provide assistance to all maintenance sections under the 39th Engineer Battalion. The

Battalion Maintenance office also acts as liason between the battalion and 45th Engineer Group, between the Battalion and the support maintenance elements and between all maintenance sections operating under the battalion. The Battalion Maintenance Section also provides information to make the command section of the battalion aware of current or impending maintenance problems. The Battalion Maintenance section also consolidates reports for command information and dissemination to higher headquarters.

The average deadline rate for the Battalion and attached units for the report period was 10.4% which is an increase over the 9.7% of the last report period. The deadline rate is indicative of the increasing difficulty of obtaining parts and of the continuous operation of the seven critical items. DX items such as batteries, starters, wheel cylinders and hydrovacs are becoming increasingly hard to find. 5 Ton dump trucks experienced the highest number of failures which required support maintenance (58). The high priority road projects have made it necessary to make maximum use of the dump trucks within the battalion. The drive trains of the 5 tons represent the bulk of the third echelon repair; engines, transmissions, transfers, etc. D7E Tractors had the second highest rate of failures (55). These failures were mainly due to the harsh working conditions experienced by the 59th Land Clearing Company.

2. Support:

The 596th Maintenance Company (LM) and the 533rd Engineer Detachment located at CHU LAI have provided the direct support maintenance for the battalion. Civilian technical representatives from MECOM, Quinton Bud-Dynalectron Corportations assist the battalion with regard to maintenance and operation of several pieces fo special equipment.

An approximate total of 210 items of equipment were job ordered to support maintenance during the reporting period (almost double the previous reporting period total of 111). 95 items sent to the support maintenance elements were engineer items and approximately 115 items were ordnance. This increase in third shop repairs is more indicative of the increased capability of support maintenance than that of an increase in equipment failures. The 533rd Engineer Detachment joined the 596th Maintenance Company and started accepting engineer equipment for repair on 16 September 1970. This had greatly improved the support capability for engineer items. 25 items of engineer equipment were sent to the 596th during the first 47 days of the report period and were averaging 19 days in shop. The 533rd Engineer Detachment has repaired 70 pieces of equipment during the 40 days since they began work and the average time in shop has dropped to 4 days. This improved in third shop capability has promoted greater confidence in the third shop maintenance and has led the companies to submit their third eschelon maintenance to the 533rd rather than repair it themselves.

The support maintenance requirement for the report period has been (approximately) as follows:

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TYPE	QUANTITY	AVERAGE TIME IN SHOP (days)
¼ Ton	12	12
3/4 Ton	9	12
2½ Ton	11	17
5 Ton Dump	58	10
10 Ton Tractor	15	4
D7E	55	4
Scoop Loader	13	10
Grader	9	26
Crane	4	6
290 M	3	8

3. PLL:

The zero balance of repair parts in the battalion increased from 27% to 29% during the last reporting period. Continuing to be a problem in supply of repair parts are 17.5x25 tires, 12 volt batteries and all DX parts except brake shoes. The HHC PLL section has moved to a new location and are not fully set up by the end of the reporting period.

H. Medical:

During the report period malaria cases within the assigned units have continued to show an increase over previous months especially among troops living on LZ's and NDP's. The majority of the cases were not taking the necessary precautions (C-P and Dapsone Tablets). During the report period, most of the units have been employed on secondary LOC programs and have to NDP in the field and are therefore more lax in taking their pills. Command emphasis has been placed on this matter and the malaria rates have taken a downward drop in October.

I. CIVIC ACTION/PSYOPS/VIP

1. Civic Action:

There has been an increasing effort being made to get more medcaps missions in the QUANG NGAI and QUANG TIN Provinces. In this quarter there have been 4 Medcaps in the QUANG NGAI Province:

a. The first Medcap was held at PHUOC HOI, (BS 666980) which is approximately 8 miles northeast of HINH SON on ROUTE 525. The S-2 Recon Team provided security and a HB-31 ground broadcast team was provided by

S-5, 198th Infantry Brigade. Approximately 120 people were treated for illnesses ranging from minor cuts to pneumonia.

b. The second Medcap was held at the LAI (1) (BS 636858) which is approximately 9 miles south of BINH SON on ROUTE 522. The S-2 Recon team provided security for the Medcap. There were 70-80 people treated. Two people were told to go to the QUANG NGAI District Hospital for treatment.

c. Our third Medcap was a back up mission and was held at the same village as above to see if our pevious Medcap had done any goods. The people that had been treated for skin rashes, cuts and external injuries had progressed. The ones suffering from internal pain still complained.

d. Our last Medcap was held at MY LAI (2), (BS 748808) which is approximately 8 miles northeast of QUANG NGAI CITY on ROUTE 521. The S-2 Recon team provided security for the mission. About 50 people were treated. This village was not the primary target of the Medcap Mission. Our primary target was the refugee camp at(BS 690770) but there were too many people for our Medcap team to treat. The people of MY LAI (2) seemed to be healthy and the cases treated were minor ones.

2. PSYOPS:

In the later part of August and early September the S-2 section with the aid of S-5 198th Infantry Brigade ran several ground broadcast missions on ROUTES 521, 522, and 525. The main theme of the broadcasts were VIP and rice denial. The groundbroadcasts were backed up by aerial leaflet drops and aerial broadcasts. Other aerial broadcasts and leaflet drops stressed the Chieu Hoi program, Pro- GVN, Pro-Ally and traffic safety.

3. Vountary Informant Program:

TYPE	AUG	SEP	OCT	TOTAL
Grenades	22	23	29	74
60mm rounds	7	14	29	50
81mm rounds	11	2	5	18
4.2mm rounds	0	1	0	1
90mm rounds	0	0	1	1
105mm rounds	0	3	1	4
155mm rounds	4	0	2	6
RPG rounds	4	0	2	6
PIASTERS PAID	10,260VN$	9,400VN$	24,540VN$	44,200VN$

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SECTION II: LESSONS LEARNED: Commander's Observations, Evaluations and Recommendations:

A. Personnel: None

B. Operations:

1. Expendient Drift Pins:

a. OBSERVATION: Experience has indicated that drift pins for bridge construction are not always available in the quantity and size desired.

b. EVALUATION: An expedient must be found to use in securing caps and stringers in bridge construction.

c. RECOMMENDATION: Concrete reinforcing bar cut to size will substitute as an anchor fast drift pin. The ridges on the rebar work similarly to the ridges on anchor fast nails and make an extremely good bond that won't vibrate or work loose.

2. Transportation and placement of assembled CMP:

a. OBSERVATION: The transportation and placement of assembled CMP can normally be accomplished using a low-bed trailer and a bucket loader. However, situations arise when these are not available, or site conditions, such as a narrow working space on a causeway, prevent the effective employment of this method.

b. EVALUATION: An expedient method of CMP transportation and placement must be devised for use in the above observed circumstances.

c. RECOMMENDATION: A D7E dozer can be effectively employed for the transportation of assembled CMP. The dozer blade is placed directly against the tube and chains with chain binders are used to secure the tube tightly against the blade. The blade is raised, and the dozer can be walked to the culvert site. Placement is accomplished by positioning the dozer blade over the site and lowering the blade and attached CMP into place.

3. Strutting of Large Diameter CMP:

a. OBSERVATION: Elongation of large diameter CMP for strutting is usually accomplished with the use of a vehicle jack and wood cribbing. This method takes time to set up and is prone to accidental slippage of the jack.

b. EVALUATION: An improved method of CMP Elongation should be devised to speed strutting operations and reduce jack slippage.

c. RECOMMENDATION: A Bailey Bridge jack can be used to elongate CMP for strutting. Use of such a jack eliminates the need for wood cribbing and virtually eliminates the chance of the jack accidentally slipping. Set up time is reduced considerably.

4. Lateral Wingwall Extensions:

a. OBSERVATION: It has been observed that after heavy rainfall, the causeway approaches immediately behind the wingwalls of a timber pile bridge are subject to extensive washout due to the increased turbulence and higher level of water passing under the bridge.

b. EVALUATION: Some method must be found to combat the washout of the causeway approaches.

c. RECOMMENDATION: Extensions of the bridge wingwalls should be constructed parallel to the causeway approach and extending back approximately 16 feet. Construction of the extensions is facilitated by driving three additional piles along the edge of the causeway which can be tied to one another with cable, similar to culvert headwall construction practice, or dead manned to provide stabilization.

5. Expedient Culvert Trenching:

a. OBSERVATION: Hard surfaces and the lack of D7E dozers made digging of trenches for future culvert placement impossible.

b. EVALUATION: Because of lack of D7E dozers an expedient means to dig culvert trenches had to be designed.

c. RECOMMENDATION: By laying bangalore torpedos across the roadway, and then igniting them, a near perfect culvert trench remains.

6. Culvert Placements:

a. After heavy rains, culvert tubes were found to be washed away. Culverts then had to be retrieved and reset, when only the fill from the site should have washed out.

b. EVALUATION: A means to keep culvert tubes from washing away due to heavy rains is needed.

c. RECOMMENDATION: Use of scrap metal, old steel stringers, blown 5 ton frames, etc., can be placed between culvert tubes at a multi-tube site. The scrap metal then serves as a deadman, from which the tubes can be tied down with cables.

7. Expedient Starter Rope for Chain Saw:

a. OBSERVATION: The starter rope for a chain saw wears out quite easily and is often difficult to replace, especially when out in the field.

b. EVALUATION: An expedient starter rope that is readily available had to be found.

c. RECOMMENDATION: A nylon boot lace from a SP pack makes an excellent starter rope for a chain saw and actually outlast the original chain saw rope.

31 8. Expedient Hedgerow Land Clearing:

a. OBSERVATION: When clearing rice paddies separated by hedgerows, dozers have to work perpendicular to the row, which is time consuming and inefficient.

b. EVALUATION: An expedient method for clearing hedgerows had to be developed.

c. RECOMMENDATION: A 270 foot anchor chain was attached to two dozers which were on either side of the hedgerow, working parallel to the hedgerow. This proved successful but it was necessary to equip both tractors with radios to provide effective coordination.

9. QL-1 Shoulder Repair:

a. OBSERVATION: During high intensity rainfalls, QL-1 acts as a dam and as the water rises and flows from west to east with a high velocity and nearly laminar flow, turbulence and an eddying effect are created on the downstream side as the water falls from the crown of the road to the shoulders, to the rice patties. This turbulence leads to a scour effect, very similiar in the toe or the race of open cresented weirs or dam spillways.

b. EVALUATION: A method to repair shoulder washouts and to prevent future washouts has to be developed.

c. RECOMMENDATION: To combat this problem, placing blast rock at the bottom of the shoulder, and then filling with base course and compacting to a slope of not less than 2:1 will abate this scour effect.

C. TRAINING: None

D. INTELLIGENCE: None

E. LOGISTICS: None

F. ORGANIZATION: None

James G. Ton

JAMES G. TON
LTC, CE
Commanding

33 EGD-3 (31 Oct 70) 1st Ind
SUBJECT: Operational Report of 39th Engineer Battalion (Combat) for Period Ending 31 October 1970, RCS CSFOR-65 RI)

DA, Headquarters, 45th Engineer Group (Const), APO 96308, 29 Nov 1970

TO: Commanding General, 18th Engineer Brigade, ATTN: AVBC-C, APO 96377

1. The Operational Report - Lessons Learned for the 39th Engineer Battalion (Combat) has been reviewed by the headquarters and is considered to be an accurate account of the Battalion's activities during the reporting period. This headquarters concurs with the observations and recommendations of the battalion Commander.

2. Comments follow:

a. Reference: Section I, Item B, Paragraph 2c; nonconcur. The following table reflects the correct statistics.

TYPE	AUGUST	SEPTEMBER	OCTOBER	TOTAL
Ambushes	1	2	0	3
Bridges Blown	0	0	0	0
Culverts Blown	0	2	2	4
Ground Probes	0	0	0	0
Sniper Attacks	13	8	3	28
Mortar Attacks	0	2	2	4
Rocket Attacks	0	2	0	2
Road Obstacles	0	0	0	0

b. Reference: Section I, Item C; nonconcur. The following table reflects the correct statistics.

COMPANY	KIA	WIA	KNH	WNH
HHC	0	5	0	0
A Co	0	7	0	0
B Co	2	1	0	0
C Co	0	4	0	0
D Co	0	4	0	0
137th LE Co	1	3	0	0
511th PB Co	0	0	0	0
59th LC Co	0	9	0	0
TOTAL	3	33	0	0

EGD-3 29 Nov 1970

SUBJECT: Operational Report of 39th Engineer Battalion (Combat) for Period Ending 31 October 1970, RCS CSFOR-65(R1)

c. Reference: Section I, Item F, paragraphs 1 and 2; nonconcur. Paragraph 1 should include: Class II, Class V, Class VII, Class VIII and Class IX. Paragraph 2 should include: 226th Supply and Service Co, located at Chu Lai (BT534036); and the 91st Evacuation Hospital in Chu Lai (BT534036).

d. Concur with the remainder of the observations and recommendations of the Battalion Commander.

Kenneth F. McIntyre

KENNETH F. MC INTYRE
COL, CE
Commanding

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AVBC-OS (31 Oct 70) 2nd Ind
SUBJECT: Operational Report - Lessons Learned, 39th Engineer Battalion (Combat), Period Ending 31 October 1970, RCS CSFOR-65 (R2).

DA, HEADQUARTER, 18TH ENGINEER BRIGADE, APO 96377 31 December 1970

TO: Commanding General, USAECV, ATTN: AVCC-NO, APO 96375

1. This headquarters has reviewed the Operational Report - Lessons Learned for the 39th Engineer Battalion (Combat), as indorsed by the 45th Engineer Group (Construction). The report is considered to be an accurate account of the Battalion's activities during the reporting period.

2. This headquarters concurs with the observations and recommendations of the Battalion and Group Commanders, with the following comments added. Reference: Section I, item c; nonconcur. The following table reflects the correct statistics.

COMPANY	KIA	WIA	KNH	WNH
HHC	0	5	0	2
A Co	0	7	0	1
B Co	2	1	0	0
C Co	0	3	0	0
D Co	0	4	0	0
137th LE Co	1	3	1	0
511th PB Co	0	0	0	0
59th LC Co	0	9	0	6
TOTAL	3	32	1	6

FOR THE COMMANDER:

MICHAEL R. LEIBERT
1LT, CE
Acting Assistant Adjutant General

AVCC-MO (31 Oct 70) 3rd Ind
SUBJECT: Operational Report - Lessons Learned, 39th Engineer Battalion (Combat), Period Ending 31 October 1970, RCS CSFOR-65 (R2). 12 JAN 1971

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Headquarters, United States Army Engineer Command Vietnam, APO 96491

TO: Commanding General, United States Army Vietnam, ATTN: AVHDC-DO, APO 96375

1. The significant activities and lessons learned have been reviewed and are an adequate reflection of the unit's operations during this period.

2. Reference item concerning "Equipment Shortages", page 21, para F3. Concur. 25 ton lowbed trailers are critically short throughout the Engineer Command and seriously impair movement of materials and equipment. Shortages of Radio Set, AN/GRC-125 are critical due to turnover of engineer unit radios to ARVN for ARVN Improvement and Modernization Program. These shortages impair the communication capability in the Engineer Command. At this time Engineer Command has a shortage of 138 25 ton semi-trailers and 53 AN/GRC-125 radio sets. Recommend that action be taken to expedite deliveries of 25 ton lowbed semi-trailers and AN/GRC-125 radio sets to fill critical shortages of the Engineer Command.

FOR THE COMMANDER:

R. P. SPENCER JR
1LT, CE
Asst Adjutant

CF:
18th Engineer Bde
39th Engr Bn (Cbt)

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AVHDO-DO (31 Oct 70) 4th Ind
SUBJECT: Operational Report of 39th Engineer Battalion (Combat) for Period Ending 31 October 1970, RCS CSFOR-65 (R1)

8 MAR 1971

Headquarters, United States Army Vietnam, APO San Francisco 96375

TO: Commander in Chief, United States Army Pacific, ATTN: GPOP-DT, APO 96558

1. This Headquarters has reviewed the Operational Report-Lessons Learned for the quarterly period ending 31 October 1970 from Headquarters, 39th Engineer Battalion (Combat) and comments of indorsing headquarters.

2. Reference item concerning "Equipment Status," page 21, paragraph F3 and 3rd Indorsement, paragraph 2: concur. No 25 ton low bed trailers are currently available. Shortages will be filled from Keystone assets and 100 each are due in from CONUS. EDD is unknown. This Headquarters continues to monitor status of shortages and expedite resupply when possible. Concur in statement concerning AN/GRC 125 Radios. AN/GRC 125 Radios continue to remain in a short supply posture within USARV. Some relief is expected when Keystone assets become available. When filled, AN/GRC 160 Radios will most probably be issued in lieu of AN/GRC 125 Radios. Unit has been so advised.

FOR THE COMMANDER:

R.E. THOMPSON
CPT, AGC
Assistant Adjutant General

Cy furn:
USAECV
39th Engr Bn

GPOP-DT (31 Oct 70) 5th Ind
SUBJECT: Operational Report of HQ, 39th Engineer Battalion (Combat), for Period Ending 31 October 1970, RCS CSFOR-65 (R2)

MAR 1971

HQ, US Army, Pacific, APO San Francisco 96558

TO: Assistant Chief of Staff for Force Development, Department of the Army, Washington, D. C. 20310

This headquarters concurs in subject report as indorsed.

FOR THE COMMANDER IN CHIEF:

D. D. CLINE
1LT, AGC
Asst AG